

WHAT IS CLAIMED IS:

1               1. A method of updating a supply plan used to process customer requests  
2 in an available-to-promise (ATP) system, the method comprising: updating a model of a  
3 supply chain for one or more products sold by the ATP system; copying a current supply plan  
4 used by the ATP system to process customer requests to create a second supply plan;  
5 thereafter, receiving a first plurality of customer requests at the ATP system and processing  
6 orders from the requests against the current supply plan while running the model of the  
7 supply chain process with the second supply plan as part of a process that creates a new  
8 supply plan;

9               after the new supply plan is created, synchronizing the new supply plan with  
10 the current supply plan by synchronizing orders from the first plurality of customer requests  
11 scheduled against the current supply plan into the new supply plan, wherein the  
12 synchronizing process is stopped prior to synchronizing all the orders in the first plurality of  
13 requests into the new supply plan; thereafter, temporarily stopping promising orders while  
14 synchronizing all remaining orders from the first plurality of requests not synchronized  
15 during the synchronizing process into the new supply plan; and after the remaining orders  
16 from the first plurality of requests are processed, replacing the current supply plan with the  
17 new supply plan so that the ATP system processes future customer requests against the new  
18 supply plan.

1               2. The method of claim 1 wherein the step of switching the old supply  
2 plan to the new supply plan is performed by changing a pointer to the new supply plan and  
3 setting a flag associated with the new supply plan to indicate that the new supply plan is  
4 available for ATP processing.

1               3. The method of claim 1 wherein an exception is generated if a promise  
2 made against the old supply plan cannot be made against the new supply plan.

1               4. The method of claim 3 wherein the exception causes a message to be  
2 generated and available to a planner for processing.

1               5. The method of claim 3 wherein the exception causes a message to be  
2 sent to a planner for processing.

1                 6.         The method of claim 1 wherein the step of synchronizing the new  
2 supply plan the old supply plan comprises stopping synchronization when it is determined  
3 that a predetermined number of requests still need to be synchronized.

1                 7.         The method of claim 6 wherein the predetermined number is calculated  
2 by system 10 based on an average time of synchronizing each request and a desired system  
3 downtime entered by a planner.

1                 8.         The method of claim 1 further comprising, prior to running the model,  
2 capturing a snapshot of data representing actual sales and promised requests for use in  
3 creation of the new supply plan.

1                 9.         The method of claim 1 further comprising creating a summary table  
2 from the new supply plan that can be used by the ATP system to quickly retrieve summarized  
3 availability information without computing availability from more detailed supply and  
4 demand tables.

1                 10.       The method of claim 1 further comprising pre-allocating products  
2 available for promising in the new supply plan in accordance with previously defined  
3 business objectives of an organization.

1                 11.       The method of claim 1 further comprising, after switching to the new  
2 supply plan, receiving a second plurality of customer requests by the ATP system and  
3 promising orders from the second plurality of requests against the new supply plan.

1                 12.       The method of claim 1 wherein the synchronizing process is stopped  
2 when a number of outstanding orders not synchronized into the new plan reaches a threshold.

1                 13.       The method of claim 12 wherein the threshold is a user-defined  
2 threshold.

1                 14.       A method of managing available-to-promise sales orders, the method  
2 comprising: receiving a first plurality of requests from customers and promising orders from  
3 the first plurality of requests against a first supply plan; creating a new supply plan; receiving  
4 a second plurality of requests from customers while the new supply plan is being created,  
5 wherein the second plurality of requests is received after the first plurality of requests;

6 promising orders from the second plurality of requests against the first supply plan;  
7 invalidating the first supply plan and activating the new supply plan; receiving a third  
8 plurality of requests from customers, wherein the third plurality of requests is received after  
9 the second plurality of requests; and promising orders from the third plurality of requests  
10 against the new supply plan.

1               15.     The method of claim 14 further comprising copying the old supply  
2 plan and creating the new supply plan from the copy of the old supply plan.

1               16.     An available-to-promise (ATP) system for processing customer  
2 requests, the system comprising: a supply chain planning component configured to allow a  
3 planner to update a model of a supply chain for one or more products sold by the ATP  
4 system; an order promising component configured to allow a planner to update an old supply  
5 plan used to process requests with a new supply plan by (i) copying a current supply plan  
6 used by the ATP system to process customer requests to create a second supply plan; (ii)  
7 thereafter, receiving a first plurality of customer requests at the ATP system and promising  
8 orders from the first plurality of requests against the current supply plan while the ATP  
9 system runs the model of the supply chain process with the second supply plan as part of a  
10 process that creates a new supply plan; (iii) after the new supply plan is created,  
11 synchronizing orders from the first plurality of customer requests scheduled against the  
12 current supply plan into the new supply plan until a threshold number of orders in the first  
13 plurality of requests is reached; (iv) thereafter, temporarily stopping promising orders from  
14 new customer requests received at the ATP system while checking all remaining orders from  
15 the first plurality of requests not checked during the synchronizing process against the new  
16 supply plan; and (v) after the remaining orders from the first plurality of requests are  
17 processed, switching the new plan supply for the current supply plan so that the ATP system  
18 can process future customer requests against the new supply plan.

1               17.     The system of claim 16 further comprising a demand planning  
2 component configured to allow a planner to create a demand plan that can be used by the  
3 supply chain planning component to model a supply chain.

1               18.     The system of claim 16 wherein the threshold number is a user-defined  
2 limit.